

AMENDMENTS TO THE CLAIMS

In the Claims:

The following listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A mobile communication terminal comprising:
 - a receiver (2) receiving ~~[[a]]~~ radio ~~wave~~ signals from base stations;
 - a detector (5, 6, 7) detecting spread codes from said signals received by said receiver (2);
 - a demodulator (8) demodulating the received signals with the spread codes detected by said detector (5, 6, 7);
 - a decoder (9) decoding data demodulated by said demodulator (8); and
 - a control unit (4) controlling a cell search process, and stopping signal processing of the cell search in response to detection of an invalid cell frame timing, code group or code.
2. (Currently Amended) The mobile communication terminal according to claim 1, wherein said control unit (4) determines the invalid cell frame timing, code group or code based on information received from the base station, and stops the processing of said cell search process.
3. (Currently Amended) The mobile communication terminal according to claim 2, wherein said detector (5, 6, 7) includes:
 - a slot timing detector (5) detecting slot timing from the signals received by said receiver (2),
 - a fame timing and code group detector (6) detecting frame timing and a code group based on the slot timing detected by said slot timing detector (5) from the signals received by said receiver (2), and

a code detector (7) detecting a code based on the slot timing detected by said slot timing detector (5) and the code group detected by said frame timing and code group detector from the signals received by said receiver (2).

4. (Currently Amended) The mobile communication terminal according to claim 3, wherein said control unit (4) stops the processing of received signals when the code group detected by said frame timing and code group detector (6) is not a predetermined code.

5. (Currently Amended) The mobile communication terminal according to claim 4, wherein

said frame timing and code group detector (6) includes:

a plurality of code generators ~~(15-1—15-N)~~, each of said code generators ~~(15-1—15-M)~~ generating a code corresponding to a different code group,

a plurality of dummy code generators ~~(15-(M+1)—15-N)~~ generating [[a]] dummy codes different from the code groups generated by said plurality of code generators (15-1 - 15-M),

a plurality of correlators ~~(16-1—16-N)~~, each of said correlators ~~(16-1—16-N)~~ calculating correlations between the signal received by said receiver (2) and the codes and dummy codes generated by the corresponding plurality of code generators and the plurality of dummy code generators, respectively, ~~(15-1—15-N)~~, and

a determining unit (18) determining invalidity of the detected slot timing based on the calculation result of said plurality of correlators ~~(16-1—16-N)~~.

6. (Previously Presented) The mobile communication terminal according to claim 3, wherein said control unit (4) stops the signal processing of the cell search if the code detector (7) detects a code group other than a code group including the predetermined code.

7. (Currently Amended) The mobile communication terminal according to claim 6, wherein said code detector (7) includes:

a plurality of code generators ~~(19-1—19-N)~~, each of said code generators ~~(19-1—19-M)~~ generating a different code,

a plurality of dummy code generators ~~(19-(M+1)—19-N)~~ generating [[a]] dummy codes different from the codes generated by said plurality of code generators ~~(19-1—19-M)~~,

a plurality of correlators ~~(20-1—20-N)~~, each of said correlators ~~(20-1—20-N)~~ calculating correlations between the data signal received by said receiver (2) and the codes and dummy codes generated by the corresponding plurality of code generators and the plurality of dummy code generators, respectively, ~~(19-1—19-N)~~, and

a determining unit (22) determining invalidity of the detected slot timing based on the calculation result of said plurality of correlators ~~(20-1—20-N)~~.

8. (Currently Amended) A mobile communication terminal comprising:

a receiver (2) receiving [[a]] radio wave signals from base stations;

a detector (5, 6, 7) detecting spread codes from signals received by said receiver (2),

a demodulator (8) demodulating the received signals with the spread codes detected by said detector (5, 6, 7);

a decoder (9) decoding data demodulated by said demodulator (8); and

a control unit (4) dividing a slot into a plurality of search ranges, deleting multipath in said search range, successively allowing said demodulator (8) to demodulate the received signals, and allowing said decoder (9) to decode the demodulated data and stopping the decode processing if the frame timing, code group or code in said search range is invalid.

9. (Canceled).

10. (Currently Amended) A communication method comprising the steps of:

receiving [[a]] radio wave signals from base stations;

detecting spread codes from said received signals;

demodulating the received signals with said detected spread codes;

decoding said demodulated data; and

controlling a cell search process, and stopping signal processing of the cell search if the frame timing, code group or code ~~said demodulated data~~ is invalid cell.

11. (Currently Amended) The communication method according to claim 10, wherein said step of stopping the signal processing of the cell search includes the step of determining an

invalid cell frame timing, code group or code based on information received from the base station, and stopping the signal processing of the cell search process.

12. (Previously Presented) The communication method according to claim 11, wherein said step of detecting the spread codes includes the steps of:

detecting slot timing from said received signals,

detecting a code group based on said detected slot timing from said received signals,

and

detecting a code based on said detected slot timing and said detected code group.

13. (Previously Presented) The communication method according to claim 12, wherein said step of stopping the signal processing of the cell search includes the step of stopping the signal processing of the cell search if the code group received from the base station is not a code group including a predetermined code.

14. (Currently Amended) The communication method according to claim 13, wherein said step of stopping the signal processing of the cell search process includes the steps of:

generating codes corresponding to a plurality of different code groups,

generating ~~[[a]] dummy codes~~ different from said ~~plurality of generated codes~~ groups,

calculating correlations of said received signals with respect to said ~~plurality of generated codes~~ and ~~[[the]] dummy codes~~, and

determining invalidity of the detected code group based on a result of said calculation.

15. (Previously Presented) The communication method according to claim 12, wherein said step of stopping the signal processing of the cell search includes the step of stopping the signal processing of the cell search if the code received from the base station is not a predetermined code.

16. (Currently Amended) The communication method according to claim 15, wherein said step of stopping the signal processing of the cell search includes the steps of:

generating a plurality of different codes,

generating a plurality of dummy codes different from said generated plurality of different codes,

calculating correlations of said received signals with respect to said plurality of generated different codes and said plurality of dummy codes, and

determining the invalidity of the ~~data~~ detected slot timing based on a result of said calculation.

17. (Currently Amended) A communication method comprising the steps of:

receiving ~~[[a]]~~ radio ~~wave~~ signals from base stations;

detecting slot timing from said received signals;

detecting a plurality of paths within each slot;

detecting spread codes from said received signals;

for each of the plurality of paths, deleting multipath of the spread codes already detected within a predetermined time period;

successively demodulating the received signals subjected to the deletion of the multipath with said detected spread codes; and

decoding said demodulated data.

18. (Original) The communication method according to claim 17, wherein said decoding processing is not performed in said step of deleting the multipath if the newly detected code is the multipath.